



NRO-125-14

# *COMMONWEALTH of VIRGINIA*

## *DEPARTMENT OF ENVIRONMENTAL QUALITY*

### NORTHERN REGIONAL OFFICE

Molly Joseph Ward  
Secretary of Natural Resources

13901 Crown Court, Woodbridge, Virginia 22193  
(703) 583-3800 Fax (703) 583-3821  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

David K. Paylor  
Director

Thomas A. Faha  
Regional Director

### STATEMENT OF LEGAL AND FACTUAL BASIS

Dominion Virginia Power – Gordonsville Power Station  
Gordonsville, Virginia  
Permit No. NRO40808

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Dominion Virginia Power – Gordonsville Power Station has applied for a Title V Operating Permit for its Gordonsville facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: \_\_\_\_\_ Date: \_\_\_\_\_  
Gary Beeson  
(703) 583-3969

Air Permit Manager: \_\_\_\_\_ Date: \_\_\_\_\_  
James B. LaFratta

Regional Director: \_\_\_\_\_ Date: \_\_\_\_\_  
Thomas A. Faha

## **FACILITY INFORMATION**

### Permittee

Virginia Electric and Power Company  
5000 Dominion Boulevard  
Glen Allen, Virginia 23060

### Facility

Dominion Virginia Power – Gordonsville Power Station  
819 Hill Road  
Gordonsville, Virginia 22942

County-Plant Identification Number: 51–109–0040

## **SOURCE DESCRIPTION**

NAICS Code: 221112 – Fossil Fuel Electrical Power Generation

The Dominion Virginia Power – Gordonsville Power Station is an intermediate load, dispatching, cogeneration power plant that produces electricity for sale to Virginia Dominion Electric Power Company. The affected source consists of: two GE Frame 7EA combustion turbines (CT) each rated at 1335 MMBtu/hr firing natural gas and 1191 MMBtu/hr firing distillate fuel oil at an ambient air temperature of 0 °F; 1154 MMBtu/hr firing natural gas and 1026 MMBtu/hr firing distillate fuel oil at an ambient air temperature of 59 °F, having a nominal power rating of 80 megawatts (MW). The CTs are a combined cycle system with the exhaust of each CT connected to a heat recovery steam generators (HRSG) with supplementary duct burners (DB) each rated at 174.7 MMBtu/hr with a nominal power rating on 40 MW. Also located at the facility are; an emergency diesel generator rated at 3,000 kW; a 5,000,000 gallon fuel oil storage tank; a 231 hp diesel engine driven fire suppression water pump; and various insignificant emission units as specified in the permit. The primary fuel for the combustion turbines and the associated duct burners is natural gas with the ability to burn a backup fuel of distillate fuel oil. The emergency diesel generator must operate on ultra low sulfur diesel fuel. The diesel engine driven fire suppression water pump is fueled by numbers 1 or 2 fuel oil.

Each CT is equipped with a separate selective catalytic reduction (SCR) unit for the control of NO<sub>x</sub> emissions. The SCR uses a precious metal catalyst and ammonia to reduce NO<sub>x</sub> emissions generated by the CTs and HRSG/DBs. Additionally, the CTs use dry low-NO<sub>x</sub> burners to burn natural gas and water injection when burning numbers 1 and 2 distillate fuel oil to reduce NO<sub>x</sub> emissions. Sulfur dioxide emissions are controlled by burning fuels that contain low sulfur content, such as 1) natural gas and 2) distillate oil containing 0.05% or less sulfur content by weight.

The following federal regulations are applicable to the emission sources at the facility:

- The two combustion turbines (CT) are subject to 40 CFR 60, Subpart GG,
- The two heat recovery steam generators (HRSG) are subject to 40 CFR 60, Subpart Db,

- The emergency generator and diesel engine driven fire suppression water pump are subject to 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ,
- The 5,000,000 gallon distillate oil storage tank is subject to 40 CFR 60, Subpart Kb.

Installed on the exhaust stack of each CT is a direct compliance NO<sub>x</sub> CEMS with a collocated O<sub>2</sub> CEMS and CO CEMS. Each NO<sub>x</sub> CEMS is subject to 40 CFR, Part 75 requirements. Each CO CEMS is subject to 40 CFR, Part 60 requirements.

The facility is a Title V major source of nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), volatile organic compounds (VOC), and green house gases (GHG). The facility is located in an area that is classified as an attainment area for all pollutants and is a synthetic minor source under the Prevention of Significant Deterioration (PSD) regulations (9 VAC 5-80 Article 8). The facility is currently operating under a New Source Review (NSR) permit issued on July 10, 2014 and a Title V permit issued on September 5, 2003. The facility submitted a Title V renewal application on March 3, 2003 which was in a timely manner and the facility is currently operating under an application shield.

## **COMPLIANCE STATUS**

A full compliance evaluation of this facility, including a site visit, was conducted most recently on August 31, 2012. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, Dominion Virginia Power – Gordonsville Power Station has not been found to be in violation of any state or federal applicable requirements at this time.

## EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment</b>							
I-A	1	GE Frame 7EA Stationary Combustion Turbine (CT) firing natural gas fuel and backup distillate oil fuel. Date of Construction: February 1, 1993.	1335 MMBtu/hr burning natural gas at ambient air temperature of 0 °F. 1191 MMBtu/hr burning distillate fuel oil at ambient air temperature of 0 °F. 1154 MMBtu/hr burning natural gas at ambient air temperature of 59 °F. 1026 MMBtu/hr burning distillate fuel oil at ambient air temperature of 59 °F.	Dry Low NO <sub>x</sub> (DLNO <sub>x</sub> ) combustors when burning natural gas. Water injection when burning distillate fuel oil. Selective Catalytic Reduction (SCR) for NO <sub>x</sub> emissions, manufactured by Mitsubishi Heavy Industries, Ltd. Date of Construction: February 1, 1993.	201	NO <sub>x</sub>	July 10, 2014
I-B	1	Heat Recovery Steam Generator (HRSG) with Supplementary Duct Burner (DB). Date of Construction: February 1, 1993.	174.7 MMBtu/hr burning natural gas. 166.6 MMBtu/hr burning distillate fuel oil.	SCR for NO <sub>x</sub> emissions, manufactured by Mitsubishi Heavy Industries, Ltd. Date of Construction: February 1, 1993.	201	NO <sub>x</sub>	July 10, 2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment (cont.)</b>							
II-A	2	GE Frame 7EA Stationary Combustion Turbine (CT) firing natural gas fuel and backup distillate oil fuel. Date of Construction: February 1, 1993.	1335 MMBtu/hr burning natural gas at base load and an ambient air temperature of 0 °F. 1191 MMBtu/hr burning distillate fuel oil at base load and an ambient air temperature of 0 °F. 1154 MMBtu/hr burning natural gas at ambient air temperature of 59 °F. 1026 MMBtu/hr burning distillate fuel oil at ambient air temperature of 59 °F.	DLNO <sub>x</sub> combustors when burning natural gas. Water injection when burning distillate fuel oil. SCR for NO <sub>x</sub> emissions, manufactured by Mitsubishi Heavy Industries, Ltd. Date of Construction: February 1, 1993.	202	NO <sub>x</sub>	July 10, 2014
II-B	2	Heat Recovery Steam Generator (HRSG) with Supplementary Duct Burner (DB). Date of Construction: February 1, 1993.	174.7 MMBtu/hr burning natural gas. 166.6 MMBtu/hr burning distillate fuel oil.	SCR for NO <sub>x</sub> emissions, manufactured by Mitsubishi Heavy Industries, Ltd. Date of Construction: February 1, 1993.	202	NO <sub>x</sub>	July 10, 2014

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
<b>Fuel Burning Equipment (cont.)</b>							
IV	4	Caterpillar C175-16 diesel engine generator set	4423 hp 3000 kW <sub>e</sub>	Electronic fuel injection, turbocharged engine and after-cooler.		NO <sub>x</sub>	July 10, 2014
DP-1		Diesel Engine Driven Fire Suppression Water Pump	231 hp diesel engine				July 10, 2014
<b>Storage Tanks</b>							
TK-101	--	No. 1 and 2 distillate fuel oil tank	5,000,000 gallons	--	--	--	July 10, 2014

\*The Size/Rated Capacity is provided for informational purposes only, and is not an applicable requirement.

The auxiliary boiler previously permitted has been removed from service and therefore is no longer a part of the facility. The facility requested that the term “black start” be removed from the Title V permit since the diesel generator set is an emergency generator and that its “black start” capabilities is just one of the emergency conditions in which the diesel generator can operate. The next amendment to the NSR permit will also remove this term.

**EMISSIONS INVENTORY**

The facility emission data below is actual emission data based on the 2012 annual emission update; the most current data validated by DEQ, and is summarized below in the Criteria and Hazardous Air Pollutant tables.

2012 Criteria Pollutant Emission in Tons/Year				
VOC	CO	SO <sub>2</sub>	PM-10	NO <sub>x</sub>
73.2	21.9	3.5	34.9	170.8

Pollutant	2012 Hazardous Air Pollutant Emission in Tons/Yr
Bz	0.2

**FACILITY APPLICABLE REQUIREMENTS**

The applicant submitted the following information as part of their Title V permit application dated March 3, 2008:

- An Acid Rain Permit Application
- A NO<sub>x</sub> Budget Permit Application, and
- A CAIR Permit Application

Therefore, this Federal Operating Permit (Title V) will be issued under Article 3 instead of Article 1; and Article 3 regulatory citations are stated in the permit conditions. The Title V includes conditions addressing Acid Rain (Title IV) and CAIR regulatory requirements. However, the NO<sub>x</sub> Budget requirements from the Title V permit boiler plate are not included because of the December 23, 2008 US Court of Appeals for the DC Circuit remand of CAIR. CAIR remains in place until such time as the US EPA develops a replacement. The allowances in NO<sub>x</sub> Budget Trading Program were converted into the CAIR Ozone season accounts.

Because of the addition of an emergency diesel engine generator set and the issuance of a NSR permit for that equipment, an updated Title V application dated April 12, 2013 was submitted to DEQ by the facility. The addition of the emergency diesel engine generator set adds the requirements of the federal NSPS (40 CFR 60, Subpart IIII) and MACT (40 CFR 63, Subpart ZZZZ) rules since the original renewal application dated March 3, 2008. The updated Title V application addresses the emergency diesel engine generator set and the incorporation

of the rules at 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ and the following permits:

- September 25, 1992, NSR permit was the original permit to construct and operate.
- July 30, 1993, NSR permit was to revise the auxiliary boiler size to 22 MMBtu from the original 60 MMBtu application, install a single 5 million gallon fixed roof fuel oil storage tank rather than the originally planned two 3.5 million gallon tank.
- March 9, 1995, NSR permit amended the July 30, 1993 NSR permit to modify the sulfur content of the natural gas from 0.2 grains/100 scf to 0.5 grains/100 scf and updated the frequency of the natural gas sulfur monitoring to twice per year.
- December 19, 1997, NSR permit amended the July 25, 1993 NSR permit and redefined the operating modes and the emission limits for these modes.
- May 15, 2003, NSR permit superseded July 30, 1993 NSR permit to convert the NO<sub>x</sub> and CO continuous emission monitor systems (CEMS) to direct compliance monitors; convert the NO<sub>x</sub> CEMS from a 40 CFR Part 60 compliant monitor to a 40 CFR Part 75 compliant monitor; change the requirement to determine annual emission compliance from a hourly demonstration to a daily demonstration; remove state toxic limitations for pollutants that are no longer regulated; create a state-only enforceable section in the NSR permit for toxic pollutants regulated by the state only; allow Number 1 distillate fuel oil to be burned at the facility; and update the permit recordkeeping and compliance demonstration methods to reflect the methods used in permits issued to match recently permitted CT facilities.
- September 5, 2003, the initial Title V permit was issued.
- January 31, 2013, NSR permit superseded the May 15, 2003 NSR permit and allowed for the construction and operation of the 3000 kW emergency diesel engine generator set. Because of the addition of the emergency diesel engine generator set with this NSR permit, the FOP incorporates the requirements of 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ.
- July 10, 2014, NSR permit superseded the January 31, 2013 NSR permit which made several administrative and significant amendments to the January 31, 2013 NSR permit. The amendment included procedures followed during the fuel type transfer and possible excess emissions during this activity. In addition the significant amendment to update the HAP emission calculations to reflect the correct emission factors previously determined to be incorrect. This incorrect emission limit calculation resulted in the facility being classified as a major source of HAP emissions, when in fact the calculation was incorrect and the facility was a minor source of HAP.

The Title V permit, unless stated otherwise in this SOB, includes the conditions from the NSR permit issued July 10, 2014 and additional requirements from 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ.

This facility was constructed and permitted prior to the issuance of 40 CFR 60, Subpart KKKK (Standards of Performance for Stationary Combustion Turbines) on February 25, 2005 and therefore the facility is subject to 40 CFR 60, Subpart GG, (Standards of Performance for Stationary Gas Turbines) as construction commenced after October 3, 1977.

The facility is not subject to 40 CFR 63, Subpart YYYY as described at 40 CFR 63.6090(b)(4) since it is not a major source of hazardous air pollutants (HAP).

The CTs are equipped with NO<sub>x</sub> controls (e.g., low-NO<sub>x</sub> burners, water injection and SCR) and has the potential of uncontrolled emissions which exceed the CAM applicability threshold. However, the CTs are exempt from the CAM Rule per 40 CFR 64.2(b)(1)(vi). This section states that "Emission limitations or standards for which a part 70 or 71 permit specifies a continuous compliance determination method, as defined in §64.1" are exempt from the requirements of 40 CFR 64.

The following conditions are from the current NSR permit (July 10, 2014) and are referenced from the Title V conditions:

**EMISSION UNIT APPLICABLE REQUIREMENTS – COMBUSTION TURBINES (CT) AND HEAT RECOVERY STEAM GENERATOR (HRSG) WITH SUPPLEMENTARY DUCT BURNERS (DB)**

Limitations

- Title V conditions 1 through 5 incorporate conditions 3, 4, 5, 6, and 7 of the July 10, 2014 NSR permit which provide information on the emission controls required by the NSR permit and incorporated into the Title V permit.
- Title V conditions 6 through 16 include conditions 14, 15, 16, 17, 18, 22, 23, 48, 49, 50, and 51 of the July 10, 2014 NSR permit express the CT/HRSG with DB fuel requirements and specifications.
- Title V conditions 17 through 20 places the requirements of conditions 29, 30, 31, and 37 of the July 10, 2014 NSR permit which specify the emission limits for the CT/HRSG with DB.

Monitoring

- Title V conditions 21 through 32 incorporates conditions 32, 33, 34, 39, 40, 41, 42, 43, 44, 45, 46, and 47 from the July 10, 2014 NSR permit laying out the monitoring requirements for both emissions and fuel requirements for the CT/HRSG with DB.

### Recordkeeping

- Title V conditions 33 and 34 lists the records for the CT/HRSG with DB which is required to be kept on site and available as described in the NSR permit conditions 25, 55, and 56 for use in the reporting requirements of this Title V permit.

### Reporting

- Title V condition 35 requires a notification to the Regional Air Compliance Manager of the Department of Environmental Quality's (DEQs) Northern Regional Office (NRO) within 4 business hours anytime the combined heat inputs exceed 249.9 MMBtu as stated in condition 59 of the July 10, 2014 NSR permit.
- Title V condition 36 requires quarterly reports on the operational status of the SCR as stated in condition 64(h) of the July 10, 2014 NSR permit.
- Title V condition 37 specifies monthly information necessary to get the "Ice Fog" exemption as stated in condition 62(b) of the July 10, 2014 NSR permit.
- Title V condition 38 specifies the monthly information necessary for the emergency fuel exemption as required at 40 CFR 60.332(k) and as stated in condition 62(c) of the July 10, 2014 NSR permit.
- Title V condition 39 requires the monthly reporting of the rolling 12-monthly capacity factor for each fuel burned in the HRSG with DB as stated in condition 63(a) of the July 10, 2014 NSR permit.
- Title V condition 40 requires that daily records be maintained for each HRSG with DB as required in the record keeping section and stated in condition 63(b) of the July 10, 2014 NSR permit.
- Title V condition 41 and 42 requires that if any numbers 1 and 2 distillate oil is received during the calendar quarter, a certified signed statement from the permittee that fuel supplier certifications represent all numbers 1 and 2 distillate oil received during the quarter and that the oil meets the definition of distillate oil as defined at 40 CFR 60, Subpart Db. If there are no deliveries during the quarter, the statement shall state that no deliveries were received. These requirements are specified in condition 63(c and d) of the July 10, 2014 NSR permit.
- Title V condition 43 specifies when the quarterly report is due and requires that the quarterly report include each hour in which the actual heat input of the HRSG with DB exceeds 249 MMBtu. The condition specifies the information that is required to

be submitted. This condition incorporates the requirements as stated in condition 64(a) of the July 10, 2014 NSR permit.

- Title V condition 44 requires that each instance in which the CT and the associated HRSG with DB do not burn the same fuel be reported to the Regional Air Compliance Manager of the DEQs NRO. This is as stated in condition 64(f) of the July 10, 2014 NSR permit.
- Title V condition 45 requires that the calculated SO<sub>2</sub> emissions which exceed the SO<sub>2</sub> emission limit for each CT or CT/HRSG with DB be reported to the Regional Air Compliance Manager of the DEQs NRO. The condition specifies the information to be included in the report as stated in condition 64(g) of the July 10, 2014 NSR permit.
- Title V condition 46 requires that for each month in the quarter each occasion in which the HHV of the natural gas is lower than 967 Btu/scf be reported to the Regional Air Compliance Manager of the DEQs NRO.. The condition also specifies the information which must be submitted in the report as stated in condition 64(i) of the July 10, 2014 NSR permit.
- Title V condition 47 requires that for each month in the quarter in which the HHV of the distillate fuel oil is less than 132,000 Btu/gallon be reported to the Regional Air Compliance Manager of the DEQs NRO. The condition also specifies the information which must be submitted in the report as stated in condition 64(l) of the July 10, 2014 NSR permit.
- Title V condition 48 specifies the quarterly excess emission reporting requirements from all continuous monitoring systems on the CT/HRSG with DB. This condition incorporates the requirements in conditions 62, 63, and 64 of the July 10, 2014 NSR permit.

#### **EMISSION UNIT APPLICABLE REQUIREMENTS – DIESEL ENGINE GENERATING SET**

##### **Limitations**

- Title V conditions 49 and 50 provide operational limitations for the diesel engine generating set by incorporating conditions 11 and 12 of the July 10, 2014 NSR permit.
- Title V condition 51 indicates the applicability for the diesel engine generating set to 40 CFR 60, Subpart IIII and references the location of the requirements in the Title V permit.
- Title V condition 52 indicates the applicability for the diesel engine generating set to

40 CFR 63, Subpart ZZZZ and references the location of the requirements in the Title V permit.

- Title V condition 53 describes the fuel limitations for the diesel engine generating set from condition 21 of the July 10, 2014 NSR permit.
- Title V conditions 54 through 56 describes the emission limitations for the diesel engine generating set from of the conditions 2, 28, and 36 of the July 10, 2014 NSR permit.

#### Monitoring

- Title V conditions 57 and 58 have monitoring requirements for the diesel engine generating set from conditions 8 and 48 of the July 10, 2014 NSR permit.

#### Recordkeeping

- Title V conditions 59 and 60 set out the recordkeeping requirements for the diesel engine generating set from conditions 26 and 56 of the July 10, 2014 NSR permit.

#### Testing

- Title V conditions 61 describe the testing requirements for the diesel engine generating set from condition 53 the July 10, 2014 NSR permit.
- Title V condition 62 inserts an additional statement that any additional testing must be conducted according to DEQ approval.

#### Reporting

- Title V condition 63 explains the reporting requirements of the diesel engine generating set from condition 64.d of the July 10, 2014 NSR permit.

### **DIESEL ENGINE GENERATING SET REQUIREMENTS SPECIFIC TO 40 CFR 60, SUBPART III**

#### Limitations

- Title V condition 64 are the requirements specific to the NSPS 40 CFR 60, Subpart III. A portion of condition 64 is from condition 10 of the July 10, 2014 NSR permit as the DEQ Northern Virginia BACT. The Commonwealth of Virginia has not taken delegation of 40 CFR 60, Subpart III and therefore these requirements were not included in the July 10, 2014 NSR permit, however the Commonwealth of Virginia does enforce 40 CFR 60, Subpart III under the Title V permitting program.

- Title V condition 65 requires that the diesel engine generating set be operated and maintained in accordance 40 CFR 60.4205.
- Title V condition 66 describes the operating conditions in which the diesel engine generating set may operate.
- Title V condition 67 specifies the fuel for the diesel engine generating set. The requirements of this Title V condition are also in condition 13 of the July 10, 2014 NSR permit since this is incorporated a BACT.

#### Monitoring

- Title V condition 68 specifies the requirement to install a non-resettable hour meter for monitoring the operating hours. This requirement is also in condition 8 of the July 10, 2014 NSR permit as an established BACT requirement.

#### **DIESEL ENGINE GENERATING SET REQUIREMENTS SPECIFIC TO THE RICE MACT 40 CFR 63, SUBPART ZZZZ**

- Title V condition 69 describe the requirements specific to the NESHAP 40 CFR 63, Subpart ZZZZ. The Commonwealth of Virginia has not taken delegation of this Subpart and therefore these requirements are not included in the NSR permit of July 10, 2014; however they are enforceable under the Title V permitting program in the Commonwealth of Virginia.

#### **DIESEL ENGINE DRIVEN FIRE SUPPRESSION WATER PUMP**

##### Limitations

- Title V condition 70 indicates the applicability for the diesel engine driven fire suppression water pump to 40 CFR 63, Subpart ZZZZ and references the location of the requirements in the Title V permit.
- Title V condition 71 provides fuel specifications for the diesel engine driven fire suppression water pump as stipulated in condition 14 for the July 10, 2014 NSR permit.
- Title V condition 72 limits the quantity of fuel through the diesel engine driven fire suppression water pump and applies specific requirements on fuel limitations for the diesel engine driven fire suppression water pump from conditions 20 of the July 10, 2014 NSR permit.
- Title V condition 73 establishes the visible emission limits for the diesel engine driven

fire suppression water pump from condition 38 of the July 10, 2014 NSR permit.

#### Recordkeeping

- Title V condition 74 provides the recordkeeping requirements for the diesel engine driven fire suppression water pump from condition 56(c) of the July 10, 2014 NSR permit.

#### Reporting

- Title V condition 75 specifies the reporting requirements of the diesel engine driven fire suppression water pump from condition 64 of the July 10, 2014 NSR permit.

### **DIESEL ENGINE DRIVEN FIRE SUPPRESSION WATER PUMP REQUIREMENTS SPECIFIC TO THE RICE MACT 40 CFR 63, SUBPART ZZZZ**

- Title V conditions 76 through 81 describe the requirements specific to the NESHAP 40 CFR 63, Subpart ZZZZ. The Commonwealth of Virginia has not taken delegation of this Subpart and therefore these requirements were not included in the NSR permit of July 10, 2014; however they are enforceable under the Title V permit.

### **NUMBER 1 AND 2 DISTILLATE FUEL OIL TANK**

#### Limitations

- Title V condition 82 limits the type of fuel stored in the number 1 and 2 distillate fuel oil tank as stated in condition 9 of the July 10, 2014 NSR permit.

#### Recordkeeping

- Title V condition 83 requires tank specifications to be kept at the facility as designated in condition 56 of the July 10, 2014 NSR permit.
- Title V condition 84 requires that fuel supplier certifications be maintained to demonstrate compliance with the requirement that only numbers 1 and 2 distillate oil may be stored in number 1 and 2 distillate fuel oil tank as designated in condition 9 of the July 10, 2014 NSR permit.

### **AFFECTED SOURCE WIDE CONDITIONS**

#### Limitations

- Title V condition 85 lists the federal regulations with which the facility must comply. This information is included as designated in condition 27 of the July 10, 2014 NSR

permit. The additional references for 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ are also included in this condition of the Title V permit.

- Title V condition 86 limits the total amount of numbers 1 and 2 distillate fuel oil which is allowed to be burned at the facility as designated in condition 19 of the July 10, 2014 NSR permit.
- Title V condition 87 specifies the facility wide emission limits and the specific requirements in determining the various pollutants as designated in condition 35 of the July 10, 2014 NSR permit.

#### Recordkeeping

- Title V condition 88 requires the permittee to maintain records of emission and operating data necessary to demonstrate compliance with the permit. Required items to be maintained are listed as a minimum data field. These requirements are as designated in condition 56 of the July 10, 2014 NSR permit.
- Title V condition 89 requires that the permittee maintain records of training with specific information required in this record as indicated in conditions 56 and 68 of the July 10, 2014 NSR permit.

#### Testing

- Title V condition 90 sets out the general testing requirements for the facility as designated in condition 54 of the July 10, 2014 NSR permit.
- Title V condition 91 provides guidance should additional testing be conducted in addition that required by the permit.

#### Reporting

- Title V condition 92 provides reporting requirements for the quarterly excess emission reports as required in the NSPS and NESHAP. The submittal addresses for DEQ and the EPA are included in this condition as required in conditions 57 and 64 of the July 10, 2014 NSR permit.
- Title V conditions 93 through 102 describe the daily, weekly, monthly, quarterly, and annual reporting requirements as required in condition 63 of the July 10, 2014 NSR permit.
- Title V condition 103 requires that the facility to reevaluate the PSD status with a request for a permit amendment and/or a modification to the source which creates a federal major stationary source as required in condition 59 of the July 10, 2014 NSR permit.
- Title V condition 104 requires the facility to take precautions with emissions from VOC

incidents as required in condition 24 of the July 10, 2014 NSR permit.

## **STREAMLINED REQUIREMENTS**

The following conditions from the amended July 10, 2014 NSR permit is not included in the FOP as delineated below:

- NSR permit conditions 75 and 76 are state only requirements and not enforceable in the Title V permit.

## **GENERAL CONDITIONS**

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-490 that apply to acid rain Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

### **Comments on General Conditions**

- Permit Expiration Title V permit Conditions 107 through 112.

These conditions refer to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the Code of Virginia, and the "Department of Environmental Quality Agency Policy Statement No. 2-09".

This general condition cite(s) the Article(s) that follow(s):  
Article 3 (9 VAC 5-80-360 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

9 VAC 5-80-430 – Application  
9 VAC 5-80-500 – Permit Shield  
9 VAC 5-80-510 – Action on Permit Applications

- Recordkeeping and Reporting – Title V conditions 113 through 117

These conditions set out the recordkeeping and reporting requirements of the Title V permit.

- Failure/Malfunction Reporting – Title V conditions 118 through 121

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-650 of the Article 3 Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-650 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-650. The report must be made within four daytime business hours of discovery of the malfunction.

Note: The choices below are based on continuous monitors meeting New Source Review requirements or existing source requirements listed in 9 VAC 5-40-41.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors meeting the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

Note: The choices below are based on continuous monitors meeting New Source Review requirements or existing source requirements listed in 9 VAC 5-40-41.

This general condition cites the sections that follow:

9 VAC 5-40-41 – Emissions Monitoring Procedures for Existing Sources  
9 VAC 5-40-50 – Notification, Records and Reporting  
9 VAC 5-50-50 – Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:

40 CFR 60.13 (h) – Monitoring Requirements.

- Permit Modification – Title V Condition 125

This general condition cites the sections that follow:

9 VAC 5-80-360 – Applicability, Federal Operating Permit For Stationary Sources  
9 VAC 5-80-550 – Changes to Permits.  
9 VAC 5-80-660 – Enforcement.  
9 VAC 5-80-1100 – Applicability, Permits For New and Modified Stationary Sources  
9 VAC 5-80-1605 – Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas  
9 VAC 5-80-2000 – Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

- Malfunction as an Affirmative Defense – Title V Conditions 139 through 142

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-20-180 and 9 VAC 5-80-650. The malfunction requirements are listed in general condition 145 and general condition 166 through 168. For further explanation see the comments on general condition 145.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction  
9 VAC 5-80-490 – Permit Content

- Asbestos Requirements – Title V condition 146

Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citations from the Code of Federal Regulations that follow:

40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.

40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.

40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70 – Designated Emissions Standards

9 VAC 5-80-490 – Permit Content

#### **Title IV Requirements – Title V condition 150**

Title IV Acid rain requirements are included in the Title V permit in the section titled "Title IV (Phase II Acid rain) Permit Allowances and requirements and include conditions 150, and the Title IV Phase II Acid Rain Permit Application is included in the FOP as Appendix A.

#### **Clean Air Interstate Rule (CAIR) Requirements – Title V condition 154**

CAIR requirements for the two combined cycle combustion turbine units are included in the FOP by reference. A copy of the CAIR Permit Application is provided as Attachment B to the FOP.

### **State Only Applicable Requirements**

There are no state only requirements in this permit.

### **Future Applicable Requirements**

No future applicable requirements have been identified for this facility.

### **Inapplicable Requirements**

40 CFR 60, Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage This standard does not apply to the fuel oil storage tanks because it is not applicable to units storing petroleum liquids with a vapor pressure less than 1.5 pounds per square inch (such as kerosene and fuel oil).

40 CFR 60 Subparts D, Da, and Dc – Only Subpart Db applies to the duct burners at this facility and no other NSPS under Subpart D applies because the nature and size of the activities at the facility.

40 CFR 63, Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines applies to stationary combustion turbines located at major sources of HAP emissions. Dominion Virginia Power – Gordonsville Power Station is not a major source of HAP.

40 CFR 60, Subpart KKKK – The combustion turbines were constructed prior to February 18, 2005 the applicability date of Subpart KKKK.

40 CFR 64 – The facility is exempt from CAM since the facility uses CEMS to monitor its NO<sub>x</sub> emissions.

### **Greenhouse Gases**

Gordonsville's potential greenhouse gas (GHG) emissions exceed the thresholds at which GHG are considered a "major NSR pollutant" (100,000 tpy CO<sub>2</sub>e and 100 tpy GHG on a mass basis) according to Step 2 of EPA's GHG Tailoring Rule (incorporated into Virginia's State Implementation Plan May 13, 2011). Gordonsville added an emergency diesel engine generator set which was permitted on January 31, 2013, however the increase in GHG emissions are less than 75,000 tons as a result of the modification. Gordonsville is subject to Title V permitting requirements regardless of GHG emissions due to its potential emissions of criteria pollutants, so there are no additional requirements associated with GHG applicable to Gordonsville.

The calculations for which this determination was made are as follows:

### Greenhouse Gas Emission Summary

CO <sub>2</sub>	1,564,924 tpy
CH <sub>4</sub> (as CO <sub>2</sub> )	1,272 tpy
N <sub>2</sub> O (as CO <sub>2e</sub> )	6,314 tons/yr
Total CO <sub>2e</sub>	1,572,510 tpy

### INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110. Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation <sup>1</sup>	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
	DP-1 No. 2 diesel fuel tank	9 VAC 5-80-720.B	VOC emissions less than 1 ton/yr.	
	EDG No. 2 diesel fuel tank	9 VAC 5-80-720.B	VOC emissions less than 1 ton/yr.	
CTG #1 and 2	Combustion Turbine Generator (CTG) Lube Oil Sumps	9 VAC 5-80-720.B	VOC emissions less than 1 ton/yr.	-
STG #1 and 2	Steam Turbine Generator (STG) Lube Oil Sumps	9 VAC 5-80-720.B	VOC emissions less than 1 ton/yr.	
STG #1 and 2	Hydraulic Oil Tanks	9 VAC 5-80-720.C	-	Less than 1000 gallons each.
O/W - 103 A/B/C C and O/W 104 A/B/C	2 Storm water (drain tank) Oil/Water Separator	9 VAC 5-80-720.B	VOC emissions less than 1 ton/yr.	-
-	Sulfuric Acid Tank for pond control	9 VAC 5-80-720.A.43	-	-
-	Sodium Hydroxide for boiler water treatment operation	9 VAC 5-80-720.A.43	-	-

<sup>1</sup> The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

### **CONFIDENTIAL INFORMATION**

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

### **PUBLIC PARTICIPATION**

The proposed permit was placed on public notice in the The Central Virginian on April 24, 2014. The public comment period was from April 25, 2014 through COB on May 27, 2014. There were no comments from the public as a result of this notice.

EPA concurrently reviewed the permit with a review period from April 25, 2014 through June 9, 2014. No comments were received from EPA on this permit.